

SOURCE WATER PROTECTION PLAN

12/99

Enter Name of PWS
Public Water System

PWSID # 00000

Date of Report: 00/00/00

Enter name of operator,
Certified Operator

enter operators mailing address

phone: *enter operators phone number*

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INTRODUCTION

This Source Water Protection Plan was completed by *enter name and title of preparer of this report. Also include:*

- < *Name of the system or development and county it is located in.*
- < *Public water system identification number.*
- < *Other PWS contact person's name, address, and phone number.*

This source water protection plan is intended to meet the requirements of the federal Safe Drinking Water Act (SDWA) and the Montana Source Water Protection Program. Chapters 1 through 4 are also known as a source water delineation and assessment report that are intended to meet the technical requirements of section 1453 of the SDWA. Chapters 5 and 6 are intended to meet the requirements of section 1428 of the SDWA

The Montana Source Water Protection Program is a practical and cost-effective approach to protecting public drinking water supplies from contamination. As noted above, a major component of the Montana Source Water Protection Program is termed delineation and assessment. The emphasis of the delineation and assessment report is identifying significant potential contaminant threats to public drinking water sources, assessing susceptibility to those threats in order to provide the basis needed to develop a source water protection plan for *enter name of PWS.*

Delineation is a process whereby areas that contribute water to aquifers or surface waters used for drinking water, called source water protection areas, are identified on a map. Geologic and hydrologic conditions are evaluated in order to delineate source water protection areas. Assessment involves identifying locations or regions in source water protection areas where contaminants may be generated, stored, or transported and then determining the potential for contamination of drinking water by these sources.

Delineation and assessment is the foundation of source water protection plans, the mechanism *enter name of PWS* can use to protect their drinking water source. Although voluntary, source water protection plans are the ultimate focus of source water delineation and assessment.

CHAPTER 1

BACKGROUND

The Community

Describe the population, basis of the economy, any industrial activities, and major transportation routes. Include a description of all large or major water users and/or waste generators. Indicate how domestic sewage is treated and disposed of and distinguish between areas served by septic systems and a community sewer. The purpose of this subsection is to give the unfamiliar reader a feeling for the community and activities in the area. Larger communities may be able to use a local chamber of commerce publication or other similar prepared materials to find examples that describe the community and the commercial activities in the area.

Geographic setting

Describe the general geographic setting; include reference to vicinity map as appendix. This summary should include general descriptions of the climate, physiographic features, streams and lakes, and any unique geographic characteristics. For surface water sources, include the names of the eight and eleven digit USGS Hydrologic Units and the Montana Watershed Management Region. You may be able to use an existing description associated with the local soil survey available through the Natural Resource Conservation Service office in the county seat. Other sources for geographic information include local or regional history publications, agricultural publications, National Oceanic and Atmospheric Administration climate database, and regional geology books.

The vicinity map should show the location of the public water system in Montana relative to a major town or city and major highways. The vicinity map should at a minimum be a copy of a portion of a state or regional map that shows highways, rivers, cities and towns, and the location of the public water system. Maps used for the vicinity map may include the Official Montana Highway Map or any other map of similar scale.

General description of the Source Water

Generally describe aquifer or drainage basin and regional flow system. This subsection will be very general and will use information obtained for Chapter 2, Delineation. The purpose here, as above, is to provide the unfamiliar reader with a general feeling for the source of water to your well, spring, or intake.

The Public Water Supply

List the number of residents and service connections on the system and describe the well(s). Describe the distribution system and any treatment system used. Some of this information may be readily available in the public water system files at DEQ. Attach a PWS site plan showing the location of mains, valves, water sources, storage tanks, water treatment equipment, etc. (Appendix B). Associate source codes with source locations.

Describe the depth, construction details, and general location of each well and attach well log(s) in appendix I. Be sure each log for each source is properly labeled with the source code listed on the PWS site plan. Also, describe the pump cycles, pumping rates, and specific capacity upon which the delineation is based. Well logs may be available through the Ground Water Information Center at the Montana Bureau of Mines and Geology in Butte (406 496-4336).

Water Quality

Describe available information on ambient water quality and natural conditions that may influence water quality at the public water system. Also, include descriptions of known contamination of ground water or surface water nearby the public water system. For surface water sources, include the use-classification and identify any impaired or threatened streams within the watershed and describe the prioritization and status of TMDL development. You can find this information at the following Internet site <http://water.montana.edu/docs/tmdl/>.

CHAPTER 2

DELINEATION

The source water protection area, the land area that contributes water to *enter PWS name*, is identified in this chapter. Three management areas are identified within the source water protection area. These three regions are the control zone, inventory region, and recharge region. The control zone, also known as the exclusion zone, is an area at least 100-foot radius around the well. The inventory region represents the zone of contribution of the well, which approximates a three-year groundwater time-of-travel. Analytical equations describing ground water flow using estimates of pumping and aquifer characteristics and simple hydrogeologic mapping are used to calculate groundwater time-of-travel distance. The recharge region represents the entire portion of the aquifer which contributes water to *the enter PWS name* water system.

Note: You may have to delineate a surface water buffer if your aquifer is hydraulically connected to surface water. Groundwater and surface water are considered hydraulically connected if a stream, lake, or reservoir overlies or is in contact with an unconfined alluvial valley aquifer or an outcrop of a carbonate or fractured rock aquifer. Surface water buffers will include ½ mile buffers around surface waters that are hydraulically connected to source aquifers and located within 3-year TOT of a PWS well. Buffer zones will extend 10 miles upstream from the inventory region or to watershed limits, whichever distance is shorter.

Hydrogeologic Conditions

Describe the aquifer, its properties, and boundaries sufficiently to support your delineation approach. Different methods and criteria are used to delineate subregions of the source water protection area depending on whether an aquifer is unconfined, confined, or hydraulically connected to surface water. Therefore, you need to demonstrate the nature of the aquifer and whether it is hydraulically connected to surface water. Include a description of geologic conditions such as lithologies, vertical succession of geologic units, lateral extent and thickness of the aquifer, lateral extent of confining units, structural trends, and local topography. Classify aquifer sensitivity according to the following table.

Source Water Sensitivity
High Source Water Sensitivity Surface water and GWUDISW Unconsolidated Alluvium (unconfined) Fluvial-Glacial Gravel Terrace and Pediment Gravel Shallow Fractured or Carbonate Bedrock
Moderate Source Water Sensitivity Semi-consolidated Valley Fill sediments Unconsolidated Alluvium (semi-confined)
Low Source Water Sensitivity Consolidated Sandstone Bedrock Deep Fractured or Carbonate Bedrock

Attach a geologic map and a cross-section diagram that demonstrates your hydrogeologic conceptual model. Summarize all other geologic or hydrogeologic work that has occurred in the area in table 1 and attach critical supporting documentation as an appendix. Reference to full citations listed in the Reference Section at the end of the report should be included for geologic maps, hydrogeologic maps, or other works listed in the table. Sources of geologic information may include MBMG or USGS publications available through an interlibrary loan from the Montana State Library in Helena or purchased from the MBMG publications office in Butte. Leaking underground storage tank investigation reports or other local groundwater investigations may also be available. Lithological and well information may be available through the ground water information center at the MBMG.

Table 1. List of geologic or hydrogeologic investigations near the *insert area name* area.

Title of Project	Period of Project	Area Covered	Project Purpose

Complete and include Table 2., a description of the general availability of geologic, hydrogeologic maps for the area of interest.

Table 2. List of geologic or hydrogeologic maps available for the *insert area name* area.

Title or Description	Date	Area Covered	Reference

Conceptual Model and Assumptions

Describe your conceptual model based on the hydrogeologic conditions and list all simplifying assumptions. Describe aquifer boundaries and probable sources of recharge and the direction of groundwater flow. Describe seasonal variation in groundwater flow. Be sure to discuss assumptions that may limit the accuracy of the delineation. Include a cross-section illustrating the conceptual model

Well(s) Information

Describe the well depths, construction details, and general location; attach log(s) as appendix.

Table 3. Source well information for *insert area name*.

Information	Well #1	Well #2	Well #3	Well #4
PWS Source Code				
Well Location (T, R, Sec or lat, long)				
MBMG #				
Water Right #				
Date Well was Completed				
Total Depth				
Perforated Interval				
Static Water Level				
Pumping Water Level				
Drawdown				
Test Pumping Rate				
Specific Capacity				

Methods and Criteria

Describe how you delineated the source water protection area and appropriate subregions. Source water protection areas are divided into control, inventory, and recharge regions that encompass progressively larger areas. The Montana Source Water Protection Program requires that at a minimum the delineation be completed using analytical ground water flow equations and hydrogeologic mapping. The U.S. EPA WHPA and WhAEM computer models that are available through EPA can be used to solve analytical ground water flow equations. Alternatively, another approach is to calculate the dimensions of the ground water capture zone using the uniform flow equations. You are encouraged to conduct a more in-depth analysis using a numerical model or other means as the complexity of the aquifer warrants. References should be provided for all alternative methods use.

Model Input

Present the values of variables, such as hydraulic conductivity, used to delineate the inventory region and describe the basis for using the selected values. Sources of information include reports from the Montana Bureau of Mines and Geology or the U. S. Geological Survey and DEQ files on groundwater cleanup sites. Provide a table that shows the selected values and ranges of values obtained from previous reports or general texts. Include model input/output information in Table 4 and complete time-of-travel calculations in the Appendix. Describe how each value used in the table was derived and why that value is the best estimate available. Include references or justification for using assumed values.

Table 4. Estimates of input parameters used to delineate the source water protection area.

Input Parameter	Range of Values and units	Values Used (for each well if more than one)			
		Well #1	Well #2	Well #3	Well #4
PWS Source Code					
Transmissivity					
Thickness					
Hydraulic Conductivity					
Hydraulic Gradient					
Flow Direction					
Effective Porosity					
Pumping Rate					
1-Year TOT*					
3-Year TOT*					

Delineation Results

Delineation results should be presented on a base map such as a 7.5-minute quadrangle and included in the Appendix. Use distance or time-of-travel criteria to subdivide the delineated area into regions as described by the Montana Source water Protection Program. The inventory region should account for uncertainties and seasonal variation in groundwater flow direction. You should tailor boundaries to existing, recognized, and logical geographic or political features such as a river, road, section line with fence, or ridge top.

Limiting Factors

Describe how the delineation is influenced by uncertainty in your estimates of hydraulic conductivity, aquifer thickness, porosity, hydraulic gradient, hydraulic boundaries, and pumping rate. Also, are the assumptions made in your conceptual model consistent with hydrogeologic conditions? Discuss the nature of errors resulting from the limiting factors and estimate upper and lower bounds for your delineation solution. If there

is significant uncertainty in your input values or conceptual model, you may need to conduct a sensitivity analysis to see how systematic changes in critical input values affect the final delineation results.

CHAPTER 3

INVENTORY

An inventory of potential sources of contamination was conducted for *enter PWS name* within the control and inventory regions. Potential sources of all primary drinking water contaminants and Cryptosporidium were identified, however, only significant potential contaminant sources were selected for detailed inventory. The significant potential contaminants in the *enter PWS name* inventory region are *nitrate, pathogens, fuels, solvents, herbicides, pesticides, and metals (note: eliminate contaminants based on inventory)*.

The inventory for *enter PWS name* focuses on all activities in the control zone, certain sites or land use activities in the inventory region, and general land uses and large facilities in the recharge region.

Inventory Method

Describe the method used to inventory the three zones of your source water protection area and names of the participants. Inventory methods may include business directory research, agency database research, door to door survey, windshield survey, etc.

Available databases were initially searched to identify businesses and land uses that are potential sources of regulated contaminants in the inventory region. The following steps were followed:

Step 1: Urban and agricultural land uses were identified from the U.S. Geological Survey's Geographic Information Retrieval and Analysis System (<http://nris.state.mt.us/gis/datalist.html>). Sewered and unsewered residential land use were identified from boundaries of sewer coverage obtained from municipal wastewater utilities.

Step 2: EPA's Envirofacts System (<http://www.epa.gov/enviro/>) was queried to identify EPA regulated facilities located in the Inventory Region. This system accesses facilities listed in the following databases: Resource Conservation and Recovery Information System (RCRIS), Biennial Reporting System (BRS), Toxic Release Inventory (TRI), and Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS). The available reports were browsed for facility information including the Handler/Facility Classification to be used in assessing whether a facility should be classified as a significant potential contaminant source.

Step 3: The Permit Compliance System (PCS) was queried using Envirofacts (<http://www.epa.gov/enviro/>) to identify Concentrated Animal Feeding Operations with MPDES permits. The water system operator or other local official familiar with the area included in the inventory region identified animal feeding operations that are not required to obtain a permit.

Step 4: Databases were queried to identify the following in the inventory region: Underground Storage Tanks (UST) (<http://webdev.deq.state.mt.us/UST/>), hazardous waste contaminated sites (DEQ hazardous waste site cleanup bureau), landfills (<http://nris.state.mt.us/gis/datalist.html>), abandoned mines (<http://nris.state.mt.us/gis/datalist.html>) and active mines including gravel pits. Any information on past releases and present compliance status was noted.

Step 5: A business phone directory was queried to identify businesses that generate, use, or store chemicals in the inventory region. Equipment manufacturing and/or repair facilities, printing or photographic shops, dry cleaners, farm chemical suppliers, and wholesale fuel suppliers were targeted by SIC code.

Step 6: Major road and rail transportation routes were identified throughout the inventory region (<http://nris.state.mt.us/gis/datalist.html>).

Step 7. All land uses and facilities that generate, store, or use large quantities of hazardous materials were identified within the recharge region and identified on the base map.

The steps described above form a basic inventory. Additional inventory work is usually needed based on specific site considerations.

Potential contaminant sources are designated as significant if they fall into one of the following categories:

- 1) Large quantity hazardous waste generators.
- 2) Landfills.
- 3) Underground storage tanks.
- 4) Known groundwater contamination (including open or closed hazardous waste sites, state or federal superfund sites, and UST leak sites).
- 5) Underground injection wells.
- 6) Major roads or rail transportation routes.
- 7) Cultivated cropland greater than 20 % of the inventory region.
- 8) Animal feeding operations.
- 9) Wastewater treatment facilities, sludge handling sites, or land application areas.
- 10) Septic systems.
- 11) Sewer mains.
- 12) Storm sewer outflows.
- 13) Abandoned or active mines.

Inventory Results/Control Zone

Describe land uses and potential contaminant sources for each property within the Control Zone. Complete an inventory sheet for each property within the control zone and include in Appendix H. List significant potential contaminant sources in Table 5. Show these sites relative to the source wells on the base map in Appendix F.

Inventory Results/Inventory Region

Describe land uses and potential contaminant sources within the inventory region. Complete an inventory sheet for each potential contaminant source that results in a moderate or higher susceptibility and include in Appendix H (see Table 7 in Chapter 4). Show significant potential contaminant sources and general land uses on the base map in Appendix F.

Inventory Results/Surface Water Buffer

Describe land uses and identify sources of pathogens if a surface water buffer is delineated. Pathogens typically originate from concentrated animal feeding operations, septic tanks, class V injection wells, municipal sanitary sewers, and wastewater treatment facilities.

Table 5. Significant potential contaminant sources for *enter PWS name. (examples included)*

Source	Contaminants	Description (<i>Location and nature of hazard</i>)
<i>UST</i>	<i>Gasoline</i>	
<i>Animal Feeding Operation</i>	<i>Pathogens and Nitrates</i>	
<i>Storm Sewer Outfall</i>	<i>Various organic chemicals</i>	
<i>Sanitary Sewer Main</i>	<i>Pathogens and Nitrates</i>	
<i>Septic Systems</i>	<i>Pathogens and Nitrates</i>	
<i>Class V Injection Well</i>	<i>Various organic chemicals</i>	

Inventory Results/Recharge Region

Describe land uses and large potential contaminant sources within the recharge region. Show significant potential contaminant sources and general land uses on the base map.

Inventory Update

Describe how the inventory will be updated annually and resubmitted to DEQ every five years. Include the position of the person(s) who is responsible for the update. The certified operator will update the inventory every year. Changes in land uses or potential contaminant sources will be noted and additions made as needed. The complete inventory will be submitted to DEQ every five years to ensure re-certification of the source water delineation and assessment report.

Inventory Limitations

It may not be possible to inventory all properties due to access limitations, describe the limitations of your inventory effort and assess the impact to your source water protection effort.

CHAPTER 4

SUSCEPTIBILITY ASSESSMENT

Susceptibility is the potential for a public water supply to draw water contaminated by inventoried sources at concentrations that would pose concern. Susceptibility is assessed in order to prioritize potential pollutant sources for management actions by local entities, in this case *enter PWS name*.

The goal of Source Water Management is to protect the source water by 1) controlling activities in the control zone, 2) managing significant potential contaminant sources in the Inventory Region, and 3) ensuring that land use activities in the Recharge Region pose minimal threat to the source water. Management priorities in the Inventory Region are determined by ranking the significant potential contaminant sources identified in the previous chapter according to susceptibility. Alternative management approaches that could be pursued by the *enter PWS name* to reduce susceptibility are recommended.

Susceptibility is determined by considering the hazard rating for each potential contaminant source and the existence of barriers that decrease the likelihood that contaminated water will flow to *enter PWS name* well(s) (Table 5). Hazard is rated by the proximity of a potential contaminant source to the well(s). Susceptibility ratings are presented individually for each significant potential contaminant source and each associated contaminant (Table 6). The susceptibility of each well to each potential contaminant source is assessed separately. *Susceptibility must be assessed for each significant potential contaminant source included in Table 5. A narrative describing the presence and nature of barriers for each source should accompany a table (Table 7) giving source details and hazard and susceptibility determinations. Also, recommendations for potential management actions that will reduce susceptibility further should be included in the table and discussed in the narrative.*

Table 6. Relative susceptibility to specific contaminant sources as determined by hazard and the presence of barriers.

Presence Of Barriers	Hazard		
	High	Moderate	Low
No Barriers	Very High Susceptibility	High Susceptibility	Moderate Susceptibility
One Barrier	High Susceptibility	Moderate Susceptibility	Low Susceptibility
Multiple Barriers	Moderate Susceptibility	Low Susceptibility	Very Low Susceptibility

Table 7. Susceptibility assessment for significant potential contaminant sources in the Control Zone and Inventory Region.

Source	Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management

Worksheets have been included with this template as an aid to completing the hazard and susceptibility assessments. These worksheets should be included in the plan in an appendix to support the final assessment rating for each significant potential contaminant source.

CHAPTER 5 MANAGEMENT

Generally describe the philosophy of your approach to management. Describe the conditions in the community and/or area that influenced your decisions about how you will manage potential contaminants. Include the reasoning behind your decisions and indicate that all land uses have been identified on the base map but inventory sheets were completed for only very specific activities that have the potential to contaminate your source water.

The goal of the Source water Protection Plan is to: 1) protect the source water by keeping potentially polluting materials and activities out of the control zone, and, 2) to manage the special protection region to ensure that susceptibility to land use activities and potential contaminant sources is the lowest possible.

Control Zone Management

Describe each property and each identified contaminant source in the control zone and how it will be managed. If action is required, such as inspections by the operator or state regulatory personnel, or if education is specified, include a description of the mechanism that will ensure the required action occurs. Be specific to your inventory items for which high susceptibility has been assigned. Land ownership or control through an easement is recommended (required for new wells). Model easement language can be obtained from DEQ.

Inventory Region Management

Describe general land use and each identified contaminant source in the special protection region and how it will be managed. If action is required, such as inspections by the operator or state regulatory personnel, or if education is specified, include a description of the mechanism that will ensure the required action occurs. Be specific to your inventory items.

Recharge Region Management

Describe general land use and each identified contaminant source in the protection region and how it will be managed. If action is required, such as inspections by the operator or state regulatory personnel, or if education is specified, include a description of the mechanism that will ensure the required action occurs. Be specific to your inventory items. If no management is required, describe your reason for this conclusion.

Management Implementation

If a local ordinance or on-going education is part of your management plan, describe the process by which it will occur and include an implementation schedule. Be specific! Model ordinance language specific to Montana codes can be obtained from DEQ.

CHAPTER 6

EMERGENCY PLANNING

The emergency plan identifies the principal threats to the source water, designates an emergency coordinator, and then describes a series of potential responses planned in the event of a problem arises. Another important aspect of the plan is an estimate of the equipment and materials that would be needed in the event of an emergency, a description of how a short-term replacement water supply would be handled, and a description of the funding available to deal with an emergency response.

Identification of possible disruption threats

The principal threat to the PWS has been identified as a spill, leak, or discharge in the control zone which could contaminate the source water by entering through the well bore along with contaminated shallow ground water through a failed casing or by entering the surface water system upstream from the intake. Included are spills from vehicles, spills from mobile liquid holding tanks, leaks from above or underground tanks, leaks from waste carrying pipes, and *insert specific identified threats*.

Describe any other major or secondary identified threats in the special protection or protection regions. Most PWSs will include a transportation route and potential spill as a secondary threat and some will have a specific activity occurring in the source water protection area which pose a significant threat. Not all potential sources should be listed here, only one or two for which you should genuinely be prepared.

You may wish to complete the chart below to help identify threats to your PWS. To use, read down the left hand column of conditions generally beyond your control while considering each of the potential emergencies listed across the top. Place a (+) in each square that has a high potential to result from the listed disaster or spill, a (-) if it have a minor effect on your PWS and leave the space blank if it will not effect your system.

Effects of Emergencies on a PWS

Emergency	Well Contaminated	Well out of Service	Storage Tank Damage	Broken Main	Distribution System Contamination	Power Outage
Vandalism						
Earthquake						
Flood						
Chemical Spill						
Storm Event						
Extreme Temperatures						
Power Outage						
Hazardous Material Release						

Another way to effectively use the chart is to place a number in each square that corresponds to a series of written responses. For each of the emergencies anticipated user would turn to the appropriate sheet for instructions specific to the crisis at hand, your water system, and your emergency response plan. Each sheet should contain detailed information for each of the following sections.

Designation of an emergency coordinator

The emergency coordinator for *insert PWS name and operator name*. The contact phone number is (406) *insert*

phone #. The backup emergency coordinator is *insert name and phone number*.

The emergency coordinator is familiar with the county and state DES procedures and is responsible for contacting the appropriate officials should a spill or other threat to the source water occur. The *insert county name* County DES coordinator 24 hour phone number is *insert phone #*. The State of Montana 24 hour Spill Hotline phone number is (406) 444-6911.

Equipment and material resources

The principal identified threats to the well are generally limited to spills in the control zone. Resources that may be needed to respond to a spill are heavy equipment for berm and excavation work and absorbent materials.

Describe the local availability of equipment and materials and specific details about how you can access them.

Should additional resources be needed due to the magnitude or chemical nature of a spill the *insert PWS name* will contract with an emergency response firm properly trained and equipped. A list of possible contractors is maintained and updated by the DEQ Enforcement Division (406) 444-0379.

If secondary threats have been identified, describe the equipment and material resource needs of the PWS and how you would access them.

A catastrophic loss of water will require the contracted services of a water hauler, a design engineer, and a well driller.

Procedures to shut down the well or intake

The well or intake can be turned off and isolated from the water supply system. Important valves are located as shown on appendix__. Under ideal conditions the system can operate without the supply by using water in the water storage tank can for approximately *insert actual value*. Well or intake shut down is the responsibility of the certified operator or backup.

Coordination Procedures

The *insert PWS name* SWP Plan has been made available to *the insert county name* County DES coordinator. Additionally, reportable spills will be handled as per the mandated reporting requirements as follows:

- X Agricultural chemical or fertilizer spills will be reported to the MT Department of Agriculture (406) 444-5400
- X Any refined petroleum product such as gasoline, diesel, asphalt, road oil, kerosene, fuel oil, and derivatives of mineral, animal, or vegetable oil spills in excess of 25 gallons will be reported to the DES hotline (406) 841-3911.

Procedures to communicate with water users

The nature of the PWS should allow the source water to be isolated from the distribution system in the event of a spill in the control zone which threatens source water quality. If it is determined that the source water was exposed to a contaminant the well or intake will remain off line until sampling proves the water to be safe, an evaluation done in cooperation with the MT DEQ, PWS Section.

Describe how an emergency would be communicated to water users. You may describe a network scheme where certain individuals (e.g., board members) will be responsible to call a portion your water users. You may also reference a local radio or TV station with phone numbers.

Source of emergency water

The following is general in nature. You should consider what real options would be available to you today if one of your identified disruption threats actually happened and then modify this section to those options.

Some PWSs have inactive wells that may be used in an emergency. If available, describe how an inactive well might be returned to service. Generally, an inactive well will need to be flushed, disinfected, flushed, and

shown to be free of bacteria and below the nitrate MCL by sampling to be brought into service. A Health Advisory would be in effect until the sample results were available. If the well were in use for more than two weeks, full sampling would need to occur to ensure compliance with the standards established by the SDWA.

If the well is out of service for more than *insert actual value*, an emergency supply of water may need to be arranged. The short-term plan is to haul water using a DEQ approved water hauler from a DEQ approved water source. Should this be necessary, a hauler will be contracted and a short-term plan relating to the source water and disinfection requirements will be submitted to DEQ-PWS Section for approval. *Describe the availability of a water hauler in your area that would be capable of meeting your needs. It is not necessary to contract with a hauler, just identify availability.*

Should a total loss of water occur, the services of a design engineer and well driller will be retained to assess the options. Plans and specifications for any new well will require DEQ-PWS Section review and approval prior to construction.

Disinfection and resumption of water service

The well, storage tank, or distribution system can be disinfected for bacteriological contamination as per the *insert PWS name* standard disinfection and tank cleaning procedures under the direction of the certified operator. Normal water service resumption will occur after sample results indicate the supply is safe as approved by DEQ-PWS Section and the certified operator.

Funds

Describe the funding available to implement the emergency actions you=ve considered. Indicate why this is sufficient.

Important emergency contacts and phone

CONTACT NAME	TITLE	PHONE	RESPONSIBILITY
Insert operator name	insert position title	Insert phone #	describe areas of responsibility
Insert backup operator name	insert position title	Insert phone #	describe areas of responsibility
Insert county DES coordinator name	insert position title	Insert phone #	describe areas of responsibility
Montana 24 hr.Spill Hotline"		(406) 841-3911	All reportable spills.
Greg Murfitt	MT Dept of Agriculture	(406) 444-5400	All agricultural chemical or fertilizer spills or response questions
DEQ Enforcement Division		(406)444-0379	Responds to any event that will pollute surface or ground waters.

Long-term or Alternate Water Sources

Describe the adequacy of the current water supply including an assessment of meeting peak demand during periods of summer irrigation. Describe the anticipated growth in the community for the next 10 years and your ability to meet increasing demand.

If an additional water supply is anticipated, describe how the future supply site was selected. Include a delineation and assessment report for new well site. Describe how the source water protection area for the future well, well field, or drainage basin was delineated. Include a description of how an inventory of the SWPA was completed and reference land uses as identified on the base map as well as completed inventory sheets as an appendix.

CHAPTER 7

PLAN CERTIFICATION

In order to certify a Source Water Protection Plan (SWPP), a PWS or community submits their plan to the Source Water Protection Section at the Department of Environmental Quality (DEQ) for review. The purpose of the review and certification is to verify that the SWPP meets the requirements of the Safe Drinking Water Act and the Montana Source Water Protection Program. DEQ staff will evaluate the plan to determine if it contains the information described in the Montana program and SDWA.

The delineation and assessment chapters (SWDAR) of this plan were completed by *insert preparer name*. The SWDAR has been reviewed by *insert PWS operator name or managing entity contact* and a concurrence letter is attached as an appendix.

The plan was submitted to DEQ for review on *insert date*. DEQ comments were addressed and the final plan was certified by DEQ on *insert date*.

This certified plan is available for public review from *insert availability information*. A synopsis of this plan will be included in our annual consumer confidence report.

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